

# Notice of Allowability

Application No.

10/059,588

Examiner

Wai-Sing Louie

Applicant(s)

KRAMES ET AL.

Art Unit

2814

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 4/30/2007.
2. ☒ The allowed claim(s) is/are 1-10,13-33,36-46 and 93-106.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

## DETAILED ACTION

### *Allowable Subject Matter*

The following is an examiner's statement of reasons for allowance:

The prior art of record does not disclose or suggest either in singularly or in combination the following limitations and other elements in the claims:

Reference Joannopoulos et al. (US 5,955,749) do not disclose:

- A first and second semiconductor layers (the layer 604 and 608, in the prior art, are dielectric layers);
- A first electrode coupled to a first semiconductor layer;
- A second electrode on the second semiconductor layer in which the plurality of holes are formed;
- A periodic-arranged plurality of holes formed in the second semiconductor layer,
  - Where the ratio of the period and the wavelength of the emitted light is greater than about 0.1 and less than 5;
  - Where a depth of at least one of the plurality of holes is less than about one wavelength of the emitted light in the second semiconductor layer.

Reference Scherer et al. (US 6,711,200) do not disclose:

- A first electrode coupled to a first semiconductor layer;
- A periodic-arranged plurality of holes formed in the second semiconductor layer,

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- Where the ratio of the period and the wavelength of the emitted light is greater than about 0.1 and less than 5;
- Where a depth of at least one of the plurality of holes is less than about one wavelength of the emitted light in the second semiconductor layer.

References Yoo (US 6,949,395), Tanabe et al. (US 6,735,230), and Roberts et al. (US 6,335,548) do not disclose:

- A periodic-arranged plurality of holes formed in the second semiconductor layer,
  - Where the ratio of the period and the wavelength of the emitted light is greater than about 0.1 and less than 5;
  - Where a depth of at least one of the plurality of holes is less than about one wavelength of the emitted light in the second semiconductor layer.

Therefore, the above references do not disclose the claimed invention of present application and claims 1-10, 13-33, 36-46, and 93-106 are allowed.


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wai-Sing Louie whose telephone number is (571) 272-1709. The examiner can normally be reached on 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



WAI-SING LOUIE  
PRIMARY PATENT EXAMINER

Wsl  
May 23, 2007.